2. *Cardiographic Technique.*—The description of a cardiograph and the method of its employment.

(October, 1907.)

1. Psychotherapy and Surgical Psycho-therapeutics. L. Picqué.

1. *Psychotherapy.*—For some years psychotherapy has been attracting attention. The psychiatrists and neurologists have used it principally; but if it is useful to the physician why may it not also be a useful therapeutic agent for the surgeon? The author takes up the discussion of a certain class of cases with mental symptoms, hypochondriacal, in which operation may be indicated. It is very necessary to study carefully the mental condition first. It is useless to operate in old, confirmed hypochondriacs, even with visceral lesions, with the expectation of a cure of the mental state. Cures are favorable in proportion to the earliness of operation before the delusional ideas have become crystallized.

(November, 1907.)

1. The Experiments of Shepherd Ivory Franz on the Physiology of the Frontal Lobes. P. Jaquelier.
2. Remarks on the Clinical Action of Iodide on the Course of States of Stupidity and Confusion. H. Damaye.

1. *Physiology of the Frontal Lobes.*—A critical review of the excellent work of Franz. As this is a work by an American author it is not abstracted. The original is published in the Archives of Psychology, March, 1907, New York, The Science Press.

2. *Action of Iodide on Stupidity and Confusion.*—The author found good results in conditions of stupidity and confusion from the administration of iodides. The action, he concludes, was that of a stimulant and perhaps as an adjuvant in the antagonism of the organism against infection.

(December, 1907.)

1. Hospitalization of Defectives in Central Europe. E. Blinn.
2. The International Congress at Amsterdam. J. Van Deventer and F. A. Melchior.

1. *Hospitalization of Defectives.*—A review of the methods of dealing with defectives based upon conditions observed in Germany, Austria and Denmark. The author recommends separate accommodations for defectives. They should not be confined with and contaminated by the insane. Education is most important and may enable some to leave institutional care, while farm work is recommended both for the patient, and, because of its remuneration, for the hospital.

2. *The Amsterdam Congress*—The various contributions are so condensed as not to permit of further abstraction.

White (Washington).

Monatsschrift für Psychiatrie und Neurologie.

(Vol. 20. Nos. 1–6.)

1. Normal and Pathological Histology of the Human Neuroglia. G Eisath.
2. Contribution to the Knowledge of the Fiber Tracts of the Cerebrum. F. Quensel.

3. The Mental Causes of Melancholia. ALBRECHT.
4. Sensory Paths in the Spinal Cord of the Dog. SCHÜSTER.
5. Clinical and Anatomical Study of Tumors of the Cord and Spinal Column. STERTZ.
6. Successive Extirpation of a Frontal Lobe and one Cerebellar Hemisphere. MINGAZZINI and POLIMANTI.
7. Studies on the Brain Weight of Idiots. VOGT.
8. On the Relation Between the Idea of Motion and Motion and their Physical Influences. WEBER.
9. The Value of Cytological Examination of the Cerebrospinal Fluid in Neurology. APELT.
10. Cysticercus of the Fourth Ventricle. HENNEBERG.
11. Pseudo-arteriosclerosis and Neurasthenia. ORSCHANSKI.
12. Alcoholism and Heredity. RYKABOW.
13. Hysterical Paralysis of the Muscle Sense with Intact Sensibility. TETZNER.
14. Sporadic Cretinism and the Mental Disturbances in Myxedema. WENDENBURG.
15. Experimental Studies on Traumatic Cerebral Hemorrhage. YOSHIKAWA.

1. *The Normal and Pathological Histology of the Human Neuroglia.*—None of the neuroglia methods hitherto devised has given a satisfactory stain of the glia cell body. The author describes a modification of Mallory's hematoxylin fiber stain, using tannic acid to bleach out the axis cylinders, with the result that a good picture is obtained not only of the glia fibers and nuclei but also of the cell body. The author describes the normal glia tissue and reviews the Golgi-Weigert controversy. It is now known that there are two types of glia cell processes—the protoplasmic process and the so-called Weigert fibers (intercellular substance of Weigert). The Weigert fibers are not independent or structurally separate elements but they belong immediately to the cell and form with it a real unit. The glia tissue of the cortex has only protoplasmic processes, while that of the marrow has both protoplasmic and Weigert fibers.

After discussing the neroglia alterations of paresis and senile dementia the author reports the findings in seven cases of *dementia præcox,* the discussion of which forms the major portion of the contribution. In the acutely coursing cases the findings are as follows: The middle-sized and the small glia nuclei, gray-green in the normal, take a decided blue color. In addition are found large clear nuclei which in the marrow may be tremendously swollen. The outline of the round glia cell is lost or seen as a wide border—very rarely is the normal delicate cell outline visible. The granular substance of the glia cell body is increased and coarser than the normal and is mostly arranged in heaps or irregular rows about the nucleus or superficially as a band-like zone forming the cell border. The glia cells of the cortex show none of the protoplasmic processes which the glia elements in the normal cortex do. Satellite cells (Trabantzellen) are seen in the form of small glia elements (dwarf cells) close to ganglion cells or penetrating them. The fibered satellite cells arrange themselves around ganglion cells and always take on a sickle shape. No characteristic change is seen in the Weigert fibers.

The chronic cases of dementia præcox have, as an additional finding, in the deepest layer of the cortex and in the marrow, an increase in the fibered glia cells, both protoplasmic processes and Weigert fibers showing an overgrowth. The alterations ascribed to dementia præcox are held to be in the main indicative of a regressive change and thus stand in contrast to the proliferation of glia elements seen in paresis, epilepsy, sleeping sickness, senile dementia and alcoholism. The author even feels justified in outlining the differential diagnosis from the histological picture.

G. H. Kirby.

2. *Contribution to the Knowledge of the Fiber Tracts of the Cerebrum.*—Three cases of lesions in the temporo-occipital sensory speech zone are briefly reported clinically and admirably analyzed anatomically. The surface-anatomy is enriched by an especially careful indication of the parts of convolutions.

The writer is the first to start from the true auditory receiving center, the transverse temporal gyrus, T.tr. In two cases (E and D) this cortical area is intact, but its auditory radiation is more or less cut into from behind. In the other case (A), the entire T_1 is softened and only the most superior mesial part of T.tr. is preserved and with it part of the auditory radiation. (Of the three cases only the third has a permanent extensive word-imperception.) All the three cases show distinct atrophy of the internal geniculate body, case A, also atrophy of the brachium corporis quadrigemini post. Dejerine's connection of T.tr. with the pulvinar is not corroborated. Türck's bundle (from the auditory field to form the lateral part of the crus, "without participation of fibers from the occipital lobe") is partially affected in the three cases, in keeping with the participation of the radiation of T_1; the most external part of the bundle is, however, best preserved in all the three cases; in A (where T.tr. is destroyed with the exception of a mere rest at its base) the degeneration is most marked. Anton and Zingerle found atrophy but partial preservation of the most lateral part of Türck's bundle in a case with degeneration of the island and of T_1, T_2 and part of T_3, and they refer these most lateral fibers to the basal and mesial regions of the temporal lobe. Concerning the optic radiations, the three cases support Flechsig's views: the external sagittal marrow (geniculo-calcarine path) is degenerated cortico-petally, the internal sagittal marrow (from the calcarine to the pulvinar and anterior colliculus) only atrophic. The intercalate ("parietal") radiation is least affected in A, where the supramarginal and angular cortex is most involved, and it is most affected in E, where this cortical region is least affected superficially. In A, these fibers are followed partly into C p. (posterior and central gyrus) and partly into the posterior part of the fornicate gyrus, whereas the bundle of this complex nearest to the optic radiation is degenerated and can be followed into the hippocampus. In the thalamus only the pulvinar is affected and possibly the most posterior part of the dorso-lateral nucleus. In the case E, the focus involves the retrolenticular part of the internal capsule; hence the degeneration into the supracingular field and into C p. The fibers of the reticular field of the corona radiata (occipito-frontal bundle of Sachs) constitute the posterior upper thalamus bundle to the fornicate gyrus, with a possible connection with the globus pallidus. The pyramidal fibers are slightly involved in A and E.

The discussion of the association-paths is equally instructive. Meynert's U-fibers develop after the projection and callosal fibers and in a fairly definite order. The longer association-paths appear later, especially between the projection fields and the terminal areas (those latest developed), not among the sensory areas themselves. Burdach's inferior longitudinal fasciculus is certainly not an association bundle (its basal part is preserved in A, and plainly geniculo-calcarine). Flechsig recognized fibers from the auditory and the visual field to O_2 (not to the angular gyrus, as Dejerine would have it). In case D, the fibers passing occipitalward interrupted in the angular gyrus ended in the middle of O_2 and O_3. Further Quensel saw fibers from the posterior part of T_3 and T_4 and the anterior part of O_3 running forward to T_1, in front of the foot of T.tr., but not into T.tr. More laterally fibers from more anterior parts of T_3 can be followed into the anterior half of T_1, and perhaps also into the deeper parts of the external capsule (certainly not fibers from the occipital radiation).

The transverse occipital bundles of Sachs and Vialet are partly disputed; Wernicke's vertical occipital bundle is accepted as fibers between T_4 and T_3 and P_2, or as part of the arcuate bundle, between Flechsig's fields 34 and 36. The arcuate bundles include: a thick-fibered bundle from Cp to the posterior association-field and a thin-fibered one in the opposite direction, connections between fields 2 and 36 and 34, and 2 and 12. In his case Quensel found evidence of a centro-parieto-occipital path, possibly also connected with F_2 and F_3, but not with F_1 and the upper part of C. The external capsule shows no long paths between the arcuate and the uncinate bundles. The uncinate bundle is attributed to field 36 by Flechsig. In cases D and E, it was undamaged; in A, only its posterior part is degenerated, hence possibly a partial interruption in the island. The cingulum is doubly affected in E, in the angle of the fornicate gyrus above the knee of the callosum, and in the isthmus lobi limbici. The anterior focus determined only a short degeneration between the gyrus fornicatus and regio parolfactoria. Flechsig's primary cingulum is an association path of the rhinencephalon, his secondary cingulum a projection system to the inner part of T_1 and the middle part of the fornicate gyrus, and the tertiary system consists merely of shorter association paths.

The occipito-frontal bundle of Forel and Onuf is a heterotopia of the callosum and does not exist in normal brains. It is the "reticulated coronal field." The fine fibers which form the fasciculus subcallosus or stratum subcallosum, possibly an association of the caudate nucleus itself (thicker fibers) and between the caudate nucleus and scattered cell-nests and the cortex of the frontal and parietal lobe, suggests in case A fibers to the precuneus, parieto-occipital cortex and lateral part of O_1, in case D to O_1 and O_2 and angular gyrus, in case E from the frontal base and anterior marginal gyri to the head of the striatum, and again to the parietal lobe and to the pole of the temporal lobe. Thick fibers were not observed and the direction is not determined. The callosum has both real commissure and decussating fibers specially discussed with regard to the tapetum. Nothing new was established concerning the anterior commissure. Altogether this is the best paper dealing with secondary degenerations of recent years.

ADOLF MEYER.

3. *Mental Causes of Melancholia.*—The author's review of 55 cases of melancholia (Involution Melancholia of Kraepelin) shows that in 56 per cent. the mental factors played the most important role in the etiology. The psychical causes are chiefly depressing influences of a chronic nature particularly grief and worry. In a few cases acute emo-

tional shocks precipitated the psychosis. The depressive affect is believed to act as a vaso-constrictor stimulus causing improvement of the blood supply and disturbance of nutrition. When by means of opium or baths the vaso-constrictor spasm is relieved then the most prominent psychical symptom of melancholia, the anxiety, disappears. The fact that more women than men are affected is due to the greater sensitiveness of the female nervous system; psychic causes exert a special influence in the climacteric period where we see normally various kinds of stimuli from the genital organs acting on the neurovascular system. Heredity plays a subordinate role.

4. *Sensory Paths in Spinal Cord of the Dog.*—This study is based on extensive experimental work. A marked disturbance of tactile sensibility appears when the posterior columns in the lower dorsal cord are destroyed; the sense of position is at the same time affected. The impairment of pain sense is very probably due to destruction of the middle part of the lateral columns adjacent to the gray matter. Disturbance of temperature sense coincides more with the loss of pain sense than with loss of tactile sense. The impairment of touch and pain sense occurs on the side of the operation.

5. *Tumors of the Cord and Spinal Column.*—This study is a review of 8 cases. In every case some important diagnostic signs were absent. In the 5 cases of extra-medullary tumor, prodromal neuralgic symptoms were completely absent in two; the Brown-Séquard complex was present in only one case; a slow but steady progression in the compression symptoms occurred in only two cases. In no case were all of the three mentioned symptoms present and in one case all three symptoms failed. In the 3 cases of intra-medullary tumor the most characteristic signs were slow, and without demonstrable cause, progressive appearance of spinal symptoms with diminution of pain and an uninterrupted course to death, in a relatively short time. The differential diagnosis from other spinal affections such as myelitis, syphilis, multiple sclerosis and combined tract disease, is made not on the momentary picture but on the course. One should not hesitate to trephine in doubtful cases.

6. *Successive Extirpation of a Frontal Lobe and one Cerebellar Hemisphere.*—A series of experiments carried out on dogs, show that the weakness and ataxia which results when one frontal lobe is extirpated are very similar to the symptoms which result when one hemisphere of the cerebellum is removed. When both operations are successively performed, the disturbance is greatest when they are performed on opposite sides (*i. e.*, left frontal lobe and right cerebellar hemisphere or vice versa).

7. *Studies on the Brain Weight of Idiots.*—The author reviews a large material comprising the various forms of idiocy and concludes that the brain of the idiot shows a growth; this growth ceases at about the same age as does the brain growth of the normal individual, perhaps rather earlier. The brain of the idiot remains behind the normal in development because of its deficient endowment and slight tendency to growth.

8. *On the Relation Between the Idea of Motion and Motion and Their Physical Influences.*—In this study the plethysmograph was applied to an arm which was rendered immobile. Voluntary muscular movement in distant parts such as the foot, tongue, jaw, etc., caused an increase in the volume of the arm with increase of blood pressure corresponding to a contraction of the abdominal blood vessels. Increase in

the volume of the arm, general rise in blood pressure and contraction of the abdominal vessels also occurred in hypnotic states when the idea of an action was suggested (no movement being actually performed). The same result was obtained, but less regularly, in the waking state if the will and attention were concentrated on an action. On the other hand, if in hypnosis, will and attention were excluded by suggestion then passive movements could be carried out without causing any increase in the volume of the arm. The writer concludes that similar fluctuations in blood distribution occur in a person who merely thinks of motions as occur in an animal whose motor cortex is electrically stimulated.

9. *The Value of Cytological Examination of the Cerebro-Spinal Fluid for Neurology.*—This paper gives the result of 150 punctures made on 134 patients. The author adds little to previous investigations and in several instances the findings reported are of slight value without autopsies. Among the neuroses (hysteria, neurasthenia, epilepsy and paralysis agitans) no lymphocytosis was found except in one case of "neurasthenia" with a luetic history (paresis?) and in one epileptic with symptoms suspicious of tumor. Among various psychoses (melancholia, dementia præcox and alcoholic insanity) no lymphocytosis was found. One brain tumor case (round cell sarcoma) gave a positive reaction. Another case with a spindle cell sarcoma gave no lymphocytosis. In six cases of cerebral apoplexy, two gave a positive reaction, one of these being probably syphilitic; the others all denied lues. In eight cases of cerebral syphilis six gave a positive reaction while in the other two no lymphocytosis was demonstrated (without autopsy one would doubt the correctness of the diagnosis). In ten cases of delirium tremens there were no positive reactions. Twenty out of twenty-one cases of paresis had a lymphocytosis. In the one negative case the clinical picture was not typical (such a case decides nothing without autopsy). Thirty-two cases of tabes were all positive. Three cases of alcoholic polyneuritis gave a negative result, but one case of polyneuritis with Korsakow's delirium gave a lymphocytosis. In one case each of amyotrophic lateral sclerosis, poliomyelitis anterior chronica, syringomyelia and transverse myelitis no lymphocytosis was found. One case of multiple sclerosis out of five gave a positive reaction.

10. *Cysticercus of the Fourth Ventricle.*—To the 59 cases existing in the literature the author adds six. The observations of Bruns and Oppenheim have done much to increase our knowledge of the symptomatology of this affection and a diagnosis, ante mortem, is not impossible in some cases. The symptoms depend in the first place on the accompanying hydrocephalus, and headache, dizziness and vomiting stand in the center of the picture. A remittent course is characteristic, the patient showing rapid alterations between apparent good health and a condition with severe cerebral symptoms. Of particular importance is the so-called Bruns' symptom, viz., the occurrence of dizziness and nausea when the head is moved suddenly. Tumors of the cerebellum or growths in the third and fourth ventricle springing from the ependyma or choroid plexus may cause a similar clinical picture.

11. *Pseudo-Arteriosclerosis and Neurasthenia.*—An extensive review is given of the neurasthenic complex with special emphasis on the vasomotor and vascular symptoms. The author investigated in a large material the anatomical and functional alterations observed in the arterial system, including a study of the blood pressure by means of the finger tonometer.

One of the most constant signs in neurasthenia is a "pseudo-arteriosclerosis," *i. e.*, a striking hardness of the arteries, especially the brachial and radial, varying with the position of the arm—the vessel showing most rigidity when the arm is in a dependent position, becoming softer when the limb is elevated.

The results of the study are given as follows: In severe cases of neurasthenia, particularly those of constitutional type, one finds (1) an increase of tendon reflexes (especially the knee jerk); (2) diminution of the blood pressure in the finger; (3) pseudo-arteriosclerosis of the radial. These signs are often asymmetrical, *i. e.*, more marked on one side of the body than the other and they occur almost always on one and the same side of the body. The various symptoms of neurasthenia are referable to a disturbance in the vasomotor control of the vascular system which causes an impairment of nutrition in the nervous system and interferes with the function of various organs. Neurasthenia must be viewed not as a purely functional disease but as a disorder arising on a somatic basis. Constitutional neurasthenia shows clinically and anatomically a precocious but temporary senility of the organism.

12. *Alcoholism and Heredity.*—This study deals with the data obtained at the Moscow Clinic from 600 drinkers. Alcoholism, nervous affections or mental diseases existed in the direct or collateral branches in 94 per cent. Alcoholism in the family was found in 92 per cent. of all drinkers, while mental or nervous disease was present in only 21 per cent. of the whole number. Sixty-six per cent. of the drinkers had intemperate parents. Alcoholic heredity is greater in the periodic drinker than in the habitual drunkard or the casual drinker. Periodic intemperance is very apt to appear in the same form in the offspring.

Intemperance in both parents leads to severer forms of alcoholism than intemperance in one parent.

The author concludes from his review that in order to become a drunkard one must first of all inherit the disposition.

13. *Hysterical Paralysis of the Muscle sense with Intact Sensibility.*—In a case of traumatic hysteria there were no cutaneous sensory alteration, motor paralysis, astereognosis or loss of sense of position, but when the eyes or ears were closed then the patient became completely unable to execute even simple movements.

The author's investigation of the case supports Pick's theory that the symptom is due to a contraction of the field of attention.

14. *Sporadic Cretinism and the Mental Disturbances in Myxedema.*—Among the earliest physical signs in childhood are increase in size of tongue, delay in dentition and slowness in learning to walk. Gastro-intestinal disorders, especially constipation, appear early.

In the mental sphere the most striking deviation is the apathy. The intelligence, memory and judgment may be good. The patients have excitements resembling manic attacks with distractibility, loquaciousness and motor unrest. The accompanying mood shows, however, monotony and lack of affect.

15. *Traumatic Cerebral Hemorrhage.*—Experiments were carried out on a number of rats, the animal being killed immediately after a trauma of the head. Hemorrhage into the brain tissue without signs of contusion was frequently observed. No traumatic aneurysms were found. Hemorrhage in cases of fracture of the skull was not less than in those with no fracture. Hemorrhages were widely distributed but especially

common between the frontal lobe and olfactory bulb. In the spinal cord, near the central canal, bleeding was frequent.

G. H. KIRBY (Ward's Island).

Journal de Psychologie, normale et pathologique

(Fifth Year, No. 2. March–April, 1908)

1. Inversion of Orientation or Ideational Allochiria. P. JANET.
2. The Mental Disease of Robert Schumann. DR. PASCAL.
3. Clinical Contribution to the Study of Dream Deliria. A. VIGOUROUX and P. JUQUELIER.

1. *Inversion of Orientation.*—The case reported by Janet was that of a woman, 29 years of age, who began to experience, immediately after her last confinement, a peculiar and intolerable inversion of the sense of orientation. There were no other subjective or objective symptoms of any sort. Whenever she went into or came out of a room, she had a strange and unconquerable feeling that she was doing the reverse. When riding in a carriage, it seemed to her that she ought to be going in the opposite direction to reach the desired destination. In spite of this feeling she never uttered the slightest protest to the driver of the carriage, for her reason kept telling her all the time that she was actually going in the proper direction. Notwithstanding the intensity of the inverted feeling when out walking, she never allowed it to mislead her. She kept the desired course by noting carefully the names of the streets and the order of objects familiar to her along the way.

Janet speaks of the phenomenon as a sort of psychic allochiria, and postulates four possible explanations, the last of which he deems the most plausible. The condition is not wholly unknown in the normal state, as witness the feeling that some people have when on a moving train that they are going backwards instead of forwards. One hypothesis attributes the phenomenon to a purely sensorial trouble, involving in some way the semicircular canals. In Janet's case this explanation is untenable in view of the fact that there were absolutely no sensory disorders of any sort. A second explanation associates the feeling with a genuine illusion. As against this view, however, it is to be noted that the inversion did not apply to objects along the course of the journey but to the end of it. The feeling was that she ought to be going in the opposite direction, but the right direction was maintained by following carefully the familiar objects along the way. The third possible hypothesis aligns the symptom with the feeling of strangeness so often complained of by neurasthenics and other psychoneurotics. It is possibly even related to that form of negativism, so elaborately studied by Janet and others, known as " the feeling of the already seen." The fourth, and Janet's most favored, explanation attributes the trouble to a form of psychic allochiria, not far removed from such manifestations as allosynesia, mirror-writing, etc.

2. *The Mental Disease of Schumann.*—Unlike some other writers who have studied the life and life-work of Robert Schumann the composer, Pascal sees no direct relationship between his genius and mental invalidism. In fact he maintains that the genius was here the normal man, struggling with the incubus of disease. Between the outbursts of the latter, the former revealed itself along normal artistic lines. The real